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Résumé de l'article

Les théories vitalistes en physiologie, de même que l’usage des notions de « féminité » et de « masculinité », ont contribué à former le regard médical sur la santé des enfants en Ontario la fin du siècle dernier. Dans leurs choix de programmes appropriés à chacun des deux sexes, médecins et professeurs d’éducation physique ayant une formation médicale ont été influencés autant par des notions socialement construites de l’idéal de la personalité féminine que par des considérations médicales sur le développement de la poitrine, du cycle menstruel et de la capacité reproductive de la femme.

RAISING "GOOD VIGOROUS ANIMALS": MEDICAL INTEREST IN CHILDREN'S HEALTH IN ONTARIO, 1890-1930

Helen Lenskyj[1]

ABSTRACT
Vitalist theories of physiology, together with notions of 'femininity' and 'masculinity,' helped to shape medical views and practices relating to children's health in Ontario at the turn of the century. In their pronouncements on sex-appropriate school programmes and curricula, doctors and medically-trained physical educators were influenced as much by socially constructed notions of the ideal feminine personality as by medical considerations such as female chest development, menstrual function and reproductive capacity. The practice of sport and physical education in most Ontario schools reflected this medical conservatism.

RESUME
Les théories vitalistes en physiologie, de même que l'usage des notions de "féminité" et de "masculinité", ont contribué à former le regard médical sur la santé des enfants en Ontario la fin du siècle dernier. Dans leurs choix de programmes appropriés à chacun des deux sexes, médecins et professeurs d'éducation physique ayant une formation médicale ont été influencés autant par des notions socialement construites de l'idéal de la personalité féminine que par des considérations médicales sur le développement de la poitrine, du cycle menstruel et de la capacité reproductive de la femme.

Medical interest in the health of school children was influenced by a number of trends in Canadian society at the turn of the century: compulsory education, urban/industrial development and the mass immigration movement. Concern over the general health of Canadians escalated in the postwar period when doctors frequently reminded their audiences of the poor showing of young male recruits, one half of whom had been classified as physically unfit.[2] Canada's infant and maternal mortality rates

1 Centre for Women's Studies in Education, Ontario Institute for Studies in Education, Toronto, Ont.

2 See, for example, Arthur Lamb, 'Physical Education,' *Ontario Educational Association* [hereinafter OEA] *Yearbook* (1923), 160; Lamb, 'Supervision of Physical Education in Primary and Secondary Schools,' *Canadian Educational Association* [hereinafter CEA] *Yearbook* (1925), 16-17.

continued to be higher, and the life expectancy lower, than in many other western countries. Together with wartime loss of life, these patterns fanned the fears of race suicide that had developed during earlier waves of immigration from Europe.

Two important trends need to be examined before turning to the question of medical interest in children's health: the changing status of women and the role of medical professionals in legitimizing male power. The 1890s represented a starting point in the movement towards Canadian women's educational, political and economic equality. In spite of or perhaps because of these trends, male medical authorities, like their early 19th century counterparts, continued to define women first and foremost in terms of their sexual and reproductive functions. Except for the ubiquitous caveats concerning masturbation, explicit discussions of female sexuality were seldom found outside the medical journals of the Victorian era, but there is a wealth of literature that addresses the closely-related topics of 'womanhood' or 'femininity' - defined in terms of both physiology and personality - and its relationship to the sexual and reproductive health of girls and women.[3]

Medical professionals' attempts to provide a scientific rationale to justify their concern with the health of girls and women Enseignement - a group considered 'frail' by nature - were facilitated by the widespread acceptance of vitalist theories of physiology which

posited that energy for the human organism was derived from a limited supply of vital force. In girls and women, according to these theories, the reproductive organs demanded the lion's share of the vital energy and left minimal reserves for other physical or mental functions.

From the late 1800s on, doctors had attempted with little success to bar women's access to higher education and paid employment by warning against the dire consequences of these drains on their reproductive organs. Aspects of women's lives that impinged on their child-bearing capacities continued to be subject to medical scrutiny during the early decades of the century, particularly when wartime conditions necessitated a dramatic rise in women's labour force participation.

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3 These issues are addressed more fully in Chapters One and Two of my dissertation, 'The Role of Physical Education in the Socialization of Girls in Ontario, 1890-1930' (University of Toronto, 1983); this article is based on Chapter Three of the dissertation. See also Helen Lenskyj, *Out of Bounds: Women, Sport and Sexuality* (Toronto: Women's Press, 1986).

Ontario doctors in the early 1900s, like their colleagues elsewhere, were actively extending their sphere of influence to encompass public health and child welfare. With compulsory school attendance established in Ontario in 1897, medical access to children and their families was facilitated. Educators, too, took advantage of the opportunities to teach the fundamentals of physiology and hygiene, complete with heavy moral prescriptions, to the next generation of Canadian parents and homemakers, and doctors were the obvious choice as authors of school texts on these subjects. Physiology and temperance were introduced as subjects of instruction in 1893; one of the first textbooks, published the same year, proclaimed the message of temperance in each of its eleven chapters.[4]

Given the widespread belief in 'a healthy body in a healthy mind,' it was not difficult for doctors, already established as experts on the 'healthy body' to speak out on the 'healthy mind' and to address their expert advice to wider audiences that included teachers, physical educators and social reformers. And, with the proliferation of advice literature and mass circulation magazines in the early 1900s, doctors were able to reach a wide audience, at least within the educated middle class. Collections of essays for the edification of young women - for example, Benjamin Austin's *Woman: Her Character, Culture and Calling* - routinely included doctors among their contributors.[5] As well, by the turn of the century, it was usual for at least one doctor to be on the list of speakers at the annual conferences and meetings of groups such as the Ontario Educational Association (OEA) or the National Council of Women of Canada (NCWC).[6]

By the early 1900s, the child population concentrated in urban schools had become a target of the public health movement, especially in working class and/or immigrant neighbourhoods where the prevalence of disease and low standards of hygiene were major concerns. Physical education and hygiene instruction in the schools and the medical inspection of school children were two of the preventive measures adopted by school and public health authorities at this time. Schooling itself was seen by many as a health hazard: long hours spent without moving were considered unnatural for growing children, and the prevalence of eyestrain and posture problems demonstrated that such concern was justified. Therefore,

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4 William Nattress, *Public School Physiology and Temperance* (Toronto: William Briggs, 1893).

5 Benjamin Austin, ed. *Woman: Her Character, Culture and Calling* (Brantford: Book and Bible House, 1898).

6 See *OEA Yearbooks* from about 1897 and on and *NCWC Yearbooks*, 1896-1930.

the corrective as well as hygienic and preventive functions of the physical education programme were valued for their contribution to the health of both present and future generations of children. In this respect, the health and hygienic standards of girls were considered particularly crucial, both for the production of healthy babies and the promotion of middle class Anglo-Saxon values and standards in working class, immigrant homes. Domestic science instruction for girls was the principal means of achieving this kind of acculturation, but the sex-differentiated physical education and health programme also served this purpose.[7]

At the international level, the school hygiene movement had its beginnings in the early years of the century with the first International Congress of School Hygiene held in Germany in 1904. Canadian and American interest was stimulated by the visit of Sir Lauder Brunton, a prominent French medical researcher who led the second and third International Congresses in 1907 and 1910. A Canadian branch was established in 1909, mainly due to the efforts of Ontario physician Helen MacMurchy, and in 1913, the fourth Congress was held in Buffalo, New York. Writing on the history of the International Congress in 1911, MacMurchy described the situation in Great Britain, Germany, Australia and New Zealand where compulsory medical inspection of schools had been legislated several years earlier. She pointed to Canada's slowness in passing similar laws: at this time, British Columbia was the only province with effective regulations, while Ontario's 1909 act allowed for inspection but did not make it mandatory. The Toronto Board of Education appointed its first Superintendent of Nursing in 1910, and by 1915 its health department comprised twenty medical inspectors, thirteen dental surgeons and

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7 For a discussion of the public health movement in relation to children, see Neil Sutherland, *Children in English-Canadian Society* (Toronto: University of Toronto Press, 1978). For developments in home economics instruction, see Robert Stamp, 'Teaching Girls Their "God-given Place in Life",' *Atlantis* 2:2, Part 1 (Spring, 1977), 18-34.

thirty-five nurses. Subsequent legislation in 1925 provided for comprehensive medical and dental inspection throughout Ontario.[8]

The doctors who reported on these kinds of developments often expressed shock at the number of parents who were unaware of their children's health problems.[9] In 1906, the Ontario Education Association Hygiene Committee recommended that teachers test students' vision and hearing each term; the 1909 legislation was, of course, a more adequate solution for this problem from the perspective of school and health authorities, but it was expected that teachers would continue to take some responsibility. The principal of Upper Canada College, W.H. Auden, expressed the view that a teacher who influenced children also influenced parents, 'for, as it has been well said, "Canada is a land of obedient parents" and parents will do what their children tell them to.'[10]

The notion of reaching parents through their children was a guiding principle in public health work at this time, although Auden's faith in parental obedience was probably not shared by many public school teachers in working class or immigrant neighbourhoods.

An article published in the *Canadian Public Health Journal* in 1911 on school medical inspection in England provided evidence that at least one working class parent resented the social control component of the school health programme. Noting that lack of cleanliness was a major problem, the author told of a child who was sent home with a note asking his mother to clean him. She sent him back, as he was with a note that stated: 'I sends my Jimmy to school for you to teach, not to smell. He ain't a rose.'[11] Often, the next step is cases like this was to exclude the child from school.

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8 See Helen MacMurchy, 'The Fourth International Congress of School Hygiene,' *Public Health Journal* (February 1911), 58-9; F.S. Minns, 'The Methods of Dealing with Tuberculosis in the Public Schools of Toronto, Canada,' *Canadian Medical Association* [hereinafter CMA] *Journal* 5 (October, 1915), 902; John Ferguson, *History of the Ontario Medical Association* (Toronto: Murray, 1930).

9 See, for example, W.E. Struthers, 'The Open-Air School,' *OEA Yearbook* (1914), 281.

10 W.H. Auden, 'The Attitude of Teachers to School Hygiene,' *OEA Yearbook* (1910), 314.

11 Philip Snowden, MP, 'The Physical Education of British Children,' *Public Health Journal* 2 (May 1911), 216.

Canadian doctors, too, sometimes despaired of educating parents like these. Elizabeth Smith Shortt expressed her regret that children's physical welfare was left 'to parents, to nature and to chance.' A more satisfactory arrangement for Shortt would have involved state control over children's physical health, just as institutions like the church and the school supervised their moral and mental development. Universal medical inspection of schools and physical training for all children were among Shortt's proposals.[12]

The connection between medical inspection and physical education was clear: the success of a physical training programme depended on medical assessment of the child's condition at the outset. For girls, this was seen as particularly important, both because of the belief that their nature and their lifestyle made them weaker than boys and because defects in posture or physical development signified an aesthetic as well as a medical problem. Alex Thompson, a Strathroy doctor, addressed this issue in an article on 'The Necessity of Physical Health in Acquiring an Education,' which appeared in 1905:

> There is not so much danger to the boys, for they are more in the open air enjoying the outdoor games and sports, and are not so prone to a breakdown of the physical and nervous system as girls are. They are weaker physically and more sedentary in their habits. Besides their desk work in school and their studies at home they devote more or less time daily practising on the piano or other musical instrument. Need we be surprised if a number of them suffer from nerve tire or neurasthenia.[13]

A few years later, a Kitchener doctor, J.E. Hett, told his audience of teachers that it was 'really disgusting to see these girls spending hours a day at

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12 Elizabeth Shortt, quoted in 'Military Training in the Schools,' *Saturday Night* (April 28, 1917), 25.

13 Alex Thompson, 'The Necessity of Physical Health in Acquiring an Education,' *Canadian Journal of Medicine and Surgery* 27 (June 1905), 363. For a discussion of these concerns in the American context, see John Duffy, 'Mental Strain and Overpressure in the Schools,' *Journal of the History of Medicine* 23 (January 1968), 63-79.

practising on the piano and not paying any attention to physical culture.'[14] The problem of excessive music practice was clearly a middle class phenomenon, and its classification as a leisure pursuit rather than real work probably contributed to this kind of medical concern. Dr William Anderson, in his *Physical Education* and Captain Seaholm in a Toronto magazine dated 1895 were both critical of parents who raised their daughters like 'hot-house plants,' forbidding them to play the outdoor games which made their brothers healthy. Seaholm was concerned that 'fashion and perverted propriety' took over when girls reached the age of ten, while Anderson warned that 'when called upon to fulfill the functions of wives and mothers, their lives are miserable by reason of suffering.'[15]

Doctors blamed parents as well as teachers for jeopardising children's physical and mental health during their school years. A doctor reporting to the Ontario Board of Health in 1890 claimed that, if parents reared their children to be 'good vigorous animals' rather than 'intellectual prodigies or prim, fashionable young misses, it would be vastly better for the race.'[16]

By the turn of the century, with children attending school more regularly and for longer periods of time, medical attention turned to the new demands made on boys and girls. Some of this concern signified traditionalists' yearning for a golden age of 'simpler and more natural conditions' in the words of Edward Ryan, a Kingston doctor who spoke to Ontario teachers in 1906 on the problem of 'mental overwork' in the schools. Like Hett and Thompson, Ryan warned against 'cramming' young minds with information that was both complicated and useless.[17] The consequences of excessive study, according to these Ontario doctors, included eyestrain, headaches, postural defects, minimal physical strength and endurance, stomach disorders and other functional disturbances.

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14 J.E. Hett, 'The Benefits Derived from Physical Training and Medical Inspection,' *OEA Yearbook* (1909), 346.

15 William Anderson, *Anderson's Physical Culture* (Toronto: Harold Wilson, n.d.), 20; Captain A.W. Seaholm, 'Physical Training,' *Athletic Life* 2 (August 1895), 74.

16 J. Dearness, 'Sanitary Conditions of Rural Schools,' *Ontario Board of Health Report* (1898), 349.

17 Edward Ryan, 'Overwork in the Schools,' *OEA Yearbook* (1906), 400-1; Hett, 324; Thompson, 364. See also the summary of proceedings of the 1898 annual meeting of the OMA in Ferguson, 30.

Medical inspection and physical training were proposed to counter some of the ill-effects of long hours spent sitting at poorly-designed desks, in classrooms that lacked proper lighting, ventilation and heating.[18]

Criticism of the curriculum's irrelevance to the practical concerns of everyday life was made by William Oldright, a Lindsay doctor, as early as 1883 and by the 1890s, reformers like James L. Hughes, Toronto Inspector of Schools, were arguing for a new curriculum appropriate to the new conditions of urban/industrial life. Occupational training of the type represented by domestic science instruction for girls and manual training for boys was an important component of the new education. The doctors cited here, however, were less concerned with these aspects of curriculum reform than with children's physical development which tended to be neglected as attention focussed on occupational, moral and civic training. Oldright, noting that morning recess had been abolished in Lindsay schools, pointed out the health benefits of that short time in the fresh air as well as the opportunities for teachers and students to mingle, thus allowing boys to 'find out that the master really has interests in common with them and was once a boy himself.'[19] Ryan, twenty years later, blamed the predominance of female teachers for the decline in open air exercise, claiming that male teachers had been leaders in this respect in the past. Whether or not the accusation was valid, these doctors, like many educators of the period, perceived outdoor sports to be an exclusively male domain. 'Manly sports', as outdoor team games were called, were considered part of the training for 'complete manhood', producing 'better types of men' such as the graduates of Eton or Harrow or Upper Canada College.[20]

Manly sports, however, did not totally escape medical criticism. Reporting to the Ontario Board of Health for the School Hygiene Committee in 1890, Dr J. Cassidy listed the numerous injuries suffered in games like football, baseball and cricket and noted as well that none of these pro-

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18 Hett, 345; Thompson, 363-5. See also Dr John Goodchild's report on 'Causes of Absences in Toronto Schools During March,' *OEA Yearbook* (1906), 393-8.

19 William Oldright, 'School Hygiene,' *OEA Yearbook* (1883), 316-17.

20 See, for example, Ryan, 402; Auden, 316-17.

moted overall muscular development. Concluding that 'a scientific physical culture' was best for the whole muscular system, he recommended Houghton's *Physical Culture* which had been authorized by the Ontario Department of Education in 1886 as an 'excellent textbook' for this purpose. Commending Houghton for including squad drill taken from the field exercise of the British Army, Cassidy apparently saw no anomaly in the fact that the word 'pupil' had simply been substituted for 'soldier' throughout the section of the text.[21]

Like many of his colleagues, Cassidy believed that physical education could only be conducted by men. 'It will be readily conceded,' he wrote, 'that if drill, gymnastics and calisthenics are to be regularly and methodically taught ... there must be a reduction in the number of female teachers'[22] who, at that time, represented 63% of public school teachers. The debate over the merits of male and female teachers persisted well into the 20th century as the proportion of women continued to grow. However, there was one task for which many doctors considered them particularly well suited – girls' sex education. Men, of course, would undertake boys' instruction. The purpose was to 'guide aright children's thoughts and actions, preserve them from evil habits, cultivate a pure and temperate life and establish their feet in the paths of virtue,' as an Ontario doctor expressed it.[23]

Temperance instruction had been a component of the hygiene course since its introduction into the curriculum in the 1890s, and doctors in the early 1900s continued to focus on the moral content of this branch. Hett, for example, pointed out that the establishment of physical culture and

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21 J. Cassidy, 'Report of the Committee of School Hygiene on Physical Culture,' *Ontario Board of Health Report* (1890), xcvi; E. Houghton, *Physical Culture* (Toronto: Warwick, 1891).

22 Cassidy, xci.

23 Colonel T. Campbell, MD, 'The Training of Teachers in Hygiene,' *OEA Yearbook* (1906), 392. See also Peter Sandiford, 'The Education of the Adolescent,' *OEA Yearbook* (1914), 115.

medical inspection would 'open up an avenue for the proper instruction of social purity,' an essential component of a school system which aimed at producing 'noble men and women.' He suggested that these steps might alleviate some of the problems of inherited physical defects as well as the 'terrible curse' borne by unwanted children.[24] Such proposals did not, of course, imply that he condoned birth control; 'social purity' implied sexual abstinence, the only moral and reliable method of ensuring that hereditary diseases were eliminated. The problem of hereditary feeble mindedness was a major medical concern at this time, too. In 1909, an Ontario doctor urged the Ontario Medical Association to prevent 'degenerate stock' from reproducing. His suggestion was to segregate males and females 'in their own colonies.'[25]

MacMurchy and Shortt were among the doctors who favoured more active medical intervention in the form of sterilization of the feeble minded. There was, according to Shortt, a predisposition in the children of alcoholic parents to TB and insanity; the child of tuberculosis parents, too, 'was liable to defective mindedness or insanity.'[26]

These kinds of medical claims, suggesting causal relationships between physical and mental disease, gave added urgency to the public health movement among school children. Doctors and social reformers believed that community health standards could be raised by teaching working class and immigrant children the middle class, Canadian way, in the hope that they would influence their parents' standards of hygiene as well as upgrading the health of the next generation of Canadians. The problem of feeble mindedness could be controlled, to some extent, by educating children on the importance of 'family stock': in *Public School Hygiene*, for example, students were reminded how farmers breeding cattle and horses

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24 Hett, 348.

25 Dr Bruce Smith, cited in Ferguson, 48.

26 Mrs Adam [Elizabeth] Shortt, 'Some Social Aspects of Tuberculosis,' *Public Health Journal* 3 (June 1912), 307-12; see also Veronica Strong-Boag's introduction to *Woman With a Purpose* (Toronto: University of Toronto Press, 1980), xxxii. Elizabeth Shortt was one of the first female medical students at Queen's University.

took care 'to keep the race [*sic*] as purely bred as possible.' Similarly, a marriage partner should be chosen for 'soundness of body, purity of life, and purity of morals,' according to this text.[27]

At a time when contagious diseases as well as physical and mental handicaps were widespread among school children, medical attention focussed on the physical as well as the intellectual needs of students. Doctors at the 1898 Ontario Medical Association meeting presented the Minister of Education, G.W. Ross, with a seven-point recommendation regarding the dangers which excessive study and unsanitary school environments posed to children.[28] In 1914, Toronto's Medical Inspector of Schools, W.E. Struthers, attacked parents, teachers and governments for their ignorance and cruelty in failing to recognize that handicapped, sick or malnourished children could not learn at the same rate as healthy children. Moreover, he accused teachers of neglecting the child's body altogether, as they 'coddled and spoon fed' the mind.[29]

Poorly-designed classroom furniture was one component of the school environment which many doctors identified as a factor in the high influence of spinal curvature in children; scoliosis, lordosis and kyphosis were the three most common types. Speaking on the subject in 1894, W. Bremner, a Toronto doctor, cited American and European findings that about 80% of the children with curvature were girls and that most cases originated before the age of ten.[30] If this were, in fact, a valid claim, it might be possible to explain the subsequent preoccupation with corrective physical education for girls (and not for boys), often to the exclusion of games and outdoor sports. The fact that there was conflicting evidence on this issue suggests that medical practice both influenced and reflected a double standard regarding boys' and girls' physique.

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27 Short, *ibid.*; *Public School Hygiene*, 215-20; see also 77-80 and 206-7 for further examples.

28 *Proceedings* of the 1898 meeting in Ferguson, 31. See also Goodchild, 397; Hett, 346-7.

29 Struthers, 281.

30 W. Bremner, 'Faulty School Applicances and the Deformities They Cause,' *OEA Yearbook* (1894), 189-200.

The weaker muscular development of girls was regularly cited as the cause of sex differences in curvature, but in 1922, an American physiotherapist, Lillian Drew, pointed out that doctors and teachers were more likely to pay attention to asymmetry of the figure in girls 'from the esthetic standpoint,' not because girls were weaker and hence more prone to the condition. 'The terms "strong" and "weak" are individual rather than sex attributes,' Drew claimed.[31]

Medical concern with the female figure, especially at the beginning of the century, suggests that there was some validity to Drew's theory. Research on the spinal curvature tended to perpetuate this belief: according to the summary of findings presented by Terman, there had been five major studies of females before 1914, involving over 11,000 subjects, compared to three studies of males with only about 1,700 subjects. Of the two studies involving both sexes, one found a 3.5% difference with boys having the higher percentage of defects and the other a twenty-three percent difference with girls ahead. The author commented that the records of orthopaedic hospitals where patients applied for treatment showed a higher percentage of defects among girls.[32] This pattern may simply have shown that girls were more likely to receive medical attention and did not necessarily substantiate the claim that there was a higher incidence among the young female population at large. Diseases like TB and rickets were responsible for some kinds of curvature, and the higher incidence of TB among adolescent girls may have been a factor in the high percentage receiving orthopaedic treatment.

Although it is not possible to determine the exact actiology of spinal curvature among girls and young women in this period, the significance of this issue lies in the tendency of doctors and others to explain alleged sex differences in the incidence of curvature as functions of strength, citing the female frailty explanation rather than investigating a wider range of factors. Many doctors, of course, blamed women's alleged susceptibility to diseases of the reproductive organs on physical weakness, exacerbated by

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31 Lillian Drew, *Individual Gymnastics* (Philadelphia: Lea and Febiger, 1922), 141. For the 'muscular weakness' explanation, see, for example, Gertrude Hawley, *Kinesiology of Corrective Exercises* (Philadelphia: Lea and Febiger, 1937), 87, citing a British source dated 1911.

32 Lewis Terman and John Almack, *Hygiene of the School Child* (Boston: Houghton Mifflin, 1914), 72-3.

the drain of vital energy posed by the menstrual cycle, but curvature was not a disease exclusive to women.

Medical research which linked postural defects and conditions like eyestrain, headaches, gastrointestinal problems and menstrual disorders encouraged doctors and physical educators to focus on the corrective functions of exercise for children[33] Anderson suggested that parents initiate daily training for their children at a young age and pay particular attention to developing the chest and to correcting any incipient spinal curvature.[34] Dr Edward Playter, too, prescribed calisthenics for girls from the age of five to correct physical defects. He predicted that:

> if such were commonly practised, under properly qualified teachers, with medical supervision, the vast number of ill-formed girls and women we now meet with would disappear.[35]

James Barton, a doctor who was Physical Director at the University of Toronto, appeared to have limitless faith in the benefits of exercise. Among the claims he made in his 1913 textbook which was recommended reading for the Department of Education's summer school in physical culture were the following: exercise adds five to ten years to one's youth. It clears the brain, strengthens a weak heart, cures TB, clears the complexion, and increases or decreases weight.[36]

School health personnel were particularly interested in the rates of growth of school children since retarded physical development was often an indication of disease or malnutrition. Most texts for teachers or medical per-

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33 See, for example, Hett, 343; Thompson, 364.

34 Anderson, 18-19.

35 Edward Playter, 'The Physical Culture of Women' in Austin, 225.

36 James Barton, *Physical Training* (Toronto: Musson, 1913), 43-4. Barton's text was subtitled 'First Aid to the Injured and Athletics.' The athletics section which included chapters on calisthenics with dumb bells and clubs, apparatus work, corrective work and body building made no mention of girls or women, either in the text or the illustrations.

sonnel provided age/height/weight tables, and the 1926 publication, the *Canadian Health Book*, intended for a high school audience, also included these tables.[37]

Sex differences in the rate and nature of development attracted medical interest before the turn of the century. In 1901, an Ontario teacher who was a strong advocate of sex-differentiated schooling cited at length from the findings of a Dr Ladd. This doctor claimed that after puberty physical energy in the male exceeded that of the female in the proportion 9:5. He also claimed that the weight of the male's brain was greater and that structural differences made men analytical, while women 'usually *hate* analysis' (emphasis in original). Dr Tait McKenzie, a leader in physical education in both Canada and the US, also noted the male 'advantage of about 4 inches in height and from 20 to 30 pounds in weight, with strength to correspond.'[38]

These kinds of statements were based on two assumptions which characterised patriarchal thinking on questions of female physique: that strength was a function of height and weight and that the male standard was the one by which the sexes should be judged. As a corollary, it was also assumed that the well-developed male physique constituted the ideal of health for both sexes. The primacy given to brute strength in North American forms of combat sports, for example, is not universal: in oriental forms of unarmed combat such as judo or aikido, skill and technique outweigh brute strength in importance.[39]

One of the few critics of authorities like Ladd and McKenzie was an English physical educator, Reginald Roper, who pointed out in his 1917 book that the meaning of strength had been distorted to become a synonym for weight lifting rather than 'power to resist the strains of existence.' Clearly, those who defined strength in this way were those whose interests were perpetuating the belief that 'bigger' was 'better', although

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37 See, for example, Barton, 96-7; Anderson, 91; Donald Fraser, *The Canadian Health Book* (Toronto: Copp Clark, 1926), 197-8.

38 Ladd, cited by S. Silcox, 'Sexless Schools,' *OEA Yearbook* (1901), 388; R. Tait McKenzie, *Exercises in Education and Medicine*, 3rd Edition (Philadelphia: W.G. Saunders, 1923), 274.

39 For a discussion of the development of Eastern forms of unarmed combat in North America, see Lenskyj, *Out of Bounds*, 115-25.

Roper did not offer this interpretation. He explained existing sex differences in strength in terms of the differentiated demands made upon boys and girls by both convention and environment, giving the example of prevailing standards of female beauty and fashion which disadvantaged girls from an early age. As well, he identified the preoccupation with the ancient Greek ideal, exemplified for females in the physique of the statue of *Venus de Milo*. A more appropriate model for girls, Roper proposed, was the Greek statue of the 'Girl starting for a race.'[40]

The tables provided in the textbook *Physical Training* by James Barton gave the measurements of Venus de Milo at the end of the chart of 'ideal measurement (women), what you should be'; these were probably based on the dimensions of physically active men and women who participated in formal physical education or gymnastics programmes and thus were convenient research subjects for Barton. The statue's chest, waist, forearms and wrists were all somewhat larger than the ideal, but the 'average' woman of the same height was considerably smaller in her chest measurements than both the ideal and the statue, a fact which may explain the preoccupation with chest development noted earlier. The average male's chest and waist measurements were also below the ideal, but since Barton's table for men was the same as that provided by the manufacturers of gymnastic apparatus, its validity is somewhat suspect. Interestingly, the men's tables included no Greek statues, and Anderson, who gave the same table for men as Barton, reassured male readers that few men showed these ideal proportions.[41]

One unusual aspect of female development was identified around the turn of the century: although boys were taller and heavier than girls during childhood, girls grew more rapidly from about the eleventh to the fifteenth year, whereas this adolescent growth spurt affected boys at a later age.[42] This 'interesting fact' was discussed by Dr Peter Sandiford in a presentation to Ontario teachers in 1914; he explained how this finding had led some authorities, particularly opponents of coeducation, to claim that girls' energy must be conserved at this time, allowing for proper physical development, and that difficult mental work should be avoided. The op-

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40 Reginald Roper, *Physical Education in Relation to School Life* (London: George Allen and Unwin, 1917), 84-5.

41 Barton, *ibid.*; Anderson, *ibid.*

42 See, for example, McKenzie, *ibid.*

posing view was that physical and mental development paralleled one another and, therefore, girls could tackle harder work than boys during adolescence. Sandiford disagreed that sex differences in mental power existed at this or any other age but stated that there was insufficient evidence to substantiate either view.[43]

The application of the vitalist argument to this simple developmental difference was illuminating: at the one stage when a girl was bigger than a boy, bigness was no longer defined as an advantage but became problematic. Many doctors simply ignored its implications. Donald Fraser, a professor of hygiene at the University of Toronto, included in *The Canadian Health* Book a sample daily diet for a girl which contained 215 fewer calories than that for a boy, although the height and weight tables that he presented showed that girls aged 9 to 11 were on average taller and heavier than boys. Fraser did not discuss girls' growth patterns at all; similarly, in his chapter on exercise, his examples of healthy, active people were exclusively male: Tom Sawyer, Huckleberry Finn, Theodore Roosevelt and others.[44] Clearly, the 19th century tendency to view physical activity as a male domain persisted well into the 1920s, and many doctors writing on physical education continued to reinforce this patriarchal ideology, regularly warning physical educators that activities should be adapted to the age, sex and development of the student.[45]

In the postwar years, too, producing healthy Canadian babies and protecting their physical welfare during childhood became patriotic duties, according to numerous critics, both medical and non-medical. In 1917, Tait McKenzie was quoted as saying: 'Any nation is committing suicide who does not see to it that the physical development of every child is kept in advance of the mental'; Charles Hastings, Toronto's Medical Officer of Health, proclaimed it fitting that departments of health were called 'nation builders' because, he claimed, the war had made many nations realise that their babies – their 'brain and brawn' – were their 'last line of defence.'[46]

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43 Sandiford, 108.

44 Fraser, 196-200, 37-45.

45 See, for example, R. Tait McKenzie, 'The Functions and Limits of Sport in Education,' *CMA Journal* 16 (June, 1926), 631-2; A.S. Lamb, 'On Physical Education,' *CMA Journal* 16 (January, 1926), 68.

46 McKenzie, reported by Charles Hastings, 'Are We Giving the Child a Square Deal?' *Woman's Century*, special number (1918), 153; and Hastings, 152.

Patriotism and religious fervour merged in Hastings' rhetoric as he reminded the readers of *Woman's Century* that motherhood was 'the most sacred trust that the Almighty bestows on any woman,' while at the same time he asserted that prenatal care, infant health care and medical inspection of schools were all government responsibilities.[47] Dr Arthur Lamb, former Director of Physical Training at McGill, echoed these sentiments ten years later in an article in the *Public Health Journal* where he stated that 'human capital is the nation's greatest asset.' An effective physical education curriculum, according to Lamb, was one which promoted 'mental and social fitness' as well as 'organic vigor,' producing an individual 'better fitted to live and to serve his community'; moral training and preparation for citizenship were important goals of any physical education programme.[48]

Like many of his American colleagues, Lamb believed that formal, military drill had no place in schools, a position which was particularly difficult to defend in the Canadian context where Strathcona Trust funds had been directed primarily towards cadet training in schools since 1911. However, he was not the only Canadian doctor to hold this view. Dr A. Knight, author of *Public School Hygiene* and a physiology professor at Queen's University, advised his young readers to play games they found interesting –tennis, baseball, lacrosse, football or basketball -- rather than practising drill. He acknowledged that military drill promoted erect posture, 'prompt obedience' and uniform muscular development but maintained that children's interests and pleasure were important considerations as well as that they needed both games and gymnastics.[49]

Sports and games appropriate to the age, sex and ability of students were, in Lamb's view, among the most important components of school physical education programmes, taking priority over gymnastic drills devised for health or corrective purposes. In this respect, Lamb's views paralleled those of an American physical educator whom he often cited, Clark Hetherington. In his 1922 book, *A School Program in Physical Education*, Hetherington, a doctor who held administrative posts in physical education first at the University of New York and later at Stanford, stressed the

47 *Ibid.*

48 A.S. Lamb, 'Health Education,' *Public Health Journal* 18 (November, 1927), 510.

49 A.P. Knight, *The Ontario Public School Hygiene* (Toronto: Copp Clark, 1919), 100-1.

importance of 'character discipline and moral education' through 'big-muscle activities' such as athletics, which provided opportunities lacking in traditional gymnastic drill.[50] Addressing the OEA Annual Meeting in 1924, he reiterated these aspects of the 'mental side of play': expressing courage, obeying rules, self-testing, taking turns, fighting without losing self control. In addition, he considered these activities essential to healthy muscular development in children who, at elementary school age, required four to five hours of active play daily. For children over age ten, however, he explained the necessity of sex-differentiated physical education, because of 'important differences in capacity, if not in incentives and needs' between the sexes which he did not explain in detail.[51]

Lamb agreed with Hetherington on the importance of physical sex differences but viewed the development of social and moral qualities as important for both sexes. He regularly repeated his list of qualities to audiences: 'initiative, leadership, honesty, loyalty, fortitude in defeat, modesty in victory, co-operation, courtesy, self-control.'[52] In a 1923 presentation to Ontario teachers, Lamb addressed the critics who claimed that girls lacked the ability to co-operate, to play fairly and to be good losers. In a rare flash of insight on this issue, he identified the social constraints to which women had been subject 'throughout the age' and denied that there were any inherent sex differences in qualities like fairness and loyalty. His main rationale, however, for promoting these qualities in girls was to prepare them for their future place 'in the life of the country.'[53]

Although Lamb favoured games and free play over formal gymnastics, he believed, like Hetherington, that physical educators should have some experience in prescribing and supervising exercises to correct any physical defects identified during medical inspection. He regularly expressed concern that Canadian physical education teachers found it impossible to im-

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50 Clark Hetherington, *A School Program in Physical Education* (New York: World Books, 1922), 90-3.

51 *Ibid*, 54-7, 65-6; Hetherington, 'The Place of Play in Life,' *OEA Yearbook* (1924), 137.

52 Lamb, 'Physical Education for Girls,' 286. Almost identical lists appeared in 'Physical Education,' 163 and 'Supervision of Physical Education,' 18.

53 'Physical Education for Girls,' 288-9.

plement corrective programmes because of heavy workloads and inadequate preparation. Fraser, too, advised his young readers that drills were 'very useful forms of exercise, whether we like them or not,' for correcting defects.[54]

There was little evidence in the 1920s of the earlier medical concern over mental strain among school children, but as late as 1919, F.J. Munn, a Toronto doctor who supervised special classes, spoke of the dangers of homework and the advantages of farm children's 'healthy, out-door life.'[55] Lamb and Fraser emphasized the value of spontaneous play 'for fun', but they were not suggesting that all exercise should be pleasurable or that all play had value from an educational or developmental standpoint. The view that healthy children were easier to control and hence easier to teach, provided a rationale for many advocates of school health programmes, and Lamb's thinking on the subject of citizenship preparation suggested the same line of reasoning. In a similar vein, Ontario's Supervisor of Dental Inspection, Fred Conboy, told Ontario teachers in 1919 of American studies where dramatic progress in mental development and academic achievement, a lowering of truancy rates and even 'marvellous cures of insanity' had resulted when children received dental treatment. He cited Gulick's finding that children with two or more decayed teeth averaged five months behind the grade they should have attained and claimed that a similar pattern existed in Toronto schools. Of course, the crucial variable might well have been the child's socio-economic status, not the tooth decay. Like Hastings, Conboy used both patriotic and religious rationales, warning his audience that the health of the citizens, 'a nation's greatest asset,' was not receiving adequate attention. 'God has given our boys and girls bodily health and physical power, and it is the duty of the school to protect and develop it.'[56]

By the end of the 1920s, with medical and dental inspection established in Ontario schools, there appears to have been somewhat less medical apprehension that parents were neglecting their children's health. Some doctors,

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54 Lamb, 'Physical Education,' 161; Hetherington, *School Program*, 62-3; Fraser, 40-1.

55 F.J. Munn, 'The Reason for the Prevalence of Under-development in Children,' *OEA Yearbook* (1919), 330-1.

56 Fred Conboy, 'Dental Service in Relation to the Health and Progress of the Child,' *OEA Yearbook* (1919), 322-4. See also W.E. Groves, 'Physical Training,' *OEA Yearbook* (1906), 285-95.

especially those working in university health or physical education programmes, now directed their criticism at the schools. Edith Gordon, Medical Advisor of Women at the University of Toronto, blamed the public school system for 'the numerous preventable defects' found in twenty per-cent of University College first-year students during physical examinations, defects that should have been identified and corrected through physical training when these women were younger.[57]

Lamb made similar criticisms of school health programmes four years later - in 1927 - in an article on health education in the *Public Health Journal*. The last half of the article was devoted to a discussion of the place of sports in the school curriculum, its importance in relation to academic subjects, its proper supervision and its part in 'the mental, organic, motor and moral education of the boy for his life of tomorrow.' Except for one reference to 'boys and girls,' Lamb treated sports as an exclusively male experience, and the competing demands of school work and athletic activity as an exclusively male problem.[58]

Most of the doctors who expressed their views on physical education and health instruction at this time saw girls' and boys' programmes as having two different sets of goals. Promotion of health was, of course, a function which doctors saw as important for both sexes, but its outward signs were different: the healthy girl was one who had good posture, a well-developed body and grace of movement; the healthy boy was strong, muscular and active in sports. The girl's health was evaluated in terms of her ultimate responsibility to bear healthy Canadian children and the boy's in terms of his future service to the country in peacetime as a useful citizen, in wartime as an efficient soldier. Class differences modified doctors' expectations of the functions of school physical education programmes: the frequently-cited British Public School example was one which applied only to the preparation of upper class boys, while the kind of citizenship-making that Lamb and others envisioned for the vast majority of students involved the promotion of qualities such as loyalty, obedience and self control rather than initiative and leadership.

Citizenship, for women, had changing connotations in the early decades of the century: while most men commended women's war effort, few expected women's patriotism or civic duty to take on these specific forms in

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57 Edith Gordon, 'The Need of Physical Training in the Schools,' *OEA Yearbook* (1924), 135.

58 Lamb, 'Physical Education.'

peacetime. More important for the country, it was argued, was a return to traditional roles, with women devoting themselves to motherhood. Since the school was seen as an important agent in the preparation of girls for domestic life, the doctors and physical education directors who influenced school programming tended to apply the femininity criterion to medical judgments of girls' sports.

Femininity, for doctors, encompassed the social definitions generated by patriarchal tradition – grace, beauty, passivity, dependence – as well as the medical dimensions which included 'normal' chest development and menstrual function. As hegemonic agents, these doctors worked through the state-controlled health and education system, not only promoting the ideology of sex differentiation in sport but also exerting considerable influence over the actual practice of sport in schools.

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